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NOTICE

OF THE

CRANIUM OF THE NE-HOO-LE,

A NEW SPECIES OF MANATEE,

(*Manatus nasutus*) *from W. Africa.*

BY

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Read before the Boston Society of Natural History, November 7th, 1849.

The species of the genus Manatus, Cuv. which have been heretofore generally recognized, are only two in number, viz., 1, M. Americanus, Cuv. and Desm.; *Trichechus manatus*, Linn.; *le grand Lamantin des Antilles*, Buff. 2, the M. Senegalensis, G. Cuvier; *M. Africanus*, F. Cuvier; *Trichechus australis*, Shaw.* The late Dr. Richard Harlan of Philadelphia, has indicated a third species from E. Florida, to which he has given the name of M. latirostris.† This species is recognized by Lesson and Fischer, but has been more recently denied by Blainville, who in referring to it in connection with two other species of the same group, (Manatus, *Lamantin*, Blainville,) L. du tabernacle and L. de l'Orinoque, expresses himself, "ne regardant nullement comme suffisamment distinct."‡

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* Fred. Cuvier. Hist. Nat. des Cetacées. 8vo. Paris: 1836. Also Cyclopedia Anat. and Physiology, Article Cetacea. Lond.: May, 1836.

† On a species of Lamantin resembling the M. senegalensis, (Cuvier,) inhabiting the coast of E. Florida. By Richard Harlan, M.D. Journal Acad. Nat. Sciences, Philadelphia. Vol. iii, p. 390.

‡ Osteographie, Fascic. xv. Genus Manatus, p. 123.

The existence of this third species has been within a short time conclusively demonstrated by Prof. Agassiz, and the evidence on which this conclusion rests will soon be published in a memoir on those genera of Cetaceans whose remains have been found in the United States.

In the Proceedings of the Boston Society of Natural History, vol. ii, p. 198, is a notice by Dr. George A. Perkins of an animal captured in the Cavalla River, W. Africa, known to the natives as Ne-hoo-le, and which Dr. Perkins referred to the genus Manatus. In a note to that communication I stated, that this animal differed from all known species of Manatee, both in the *number of the teeth* which was for the molars $\frac{9}{9}\,\frac{9}{9}$, and in *the absence of nails on the paddles*, as well as in other characters of subordinate value. In the sequel it will be seen however that the formula for the teeth was not correctly stated. The provisional name of *Manatus nasutus* was given to this supposed species.

Quite recently, Dr. Perkins, on his return from Cape Palmas, brought with him and presented to the Boston Society of Natural History, an imperfect cranium of the same species, the lower jaw, the intermaxillary, nasal and temporal bones having been broken off by the natives as they divided the carcass amongst themselves for food. A sufficient number of characteristic parts, however, remain to demonstrate that the species, as formerly suspected, is a new one. In establishing the following characters, the cranium in question has been compared with that of the *Manatus senegalensis*, *M. Americanus and M. latirostris:* the first belonging to the Boston Society of Natural History and the others to the Academy of Natural Sciences of Philadelphia.

I. *Teeth.—Molars* $\frac{10}{10}\,\frac{10}{10}$; the first and second of the series have been dropped and their alveoli are partly filled up; the five following ones on each side, remain in use, but the last three still remain in their alveolar cavities, the roots not having as yet been developed. The enamel on all the teeth, on those which are retained in their sockets as well as on those which are in use, is perfectly smooth. The internal root of each molar has a distinct groove on its inner surface and all the roots are quite divergent. The transverse diameters of the anterior and posterior ridges are more nearly equal than in the other species.

M. Senegalensis.—Molars $\frac{9}{9}\,\frac{9}{9}$; the enamel is rugous; the inner root is not grooved, all of the roots nearly vertical, and the teeth in use not more than four. *M. latirostris.* Molars $\frac{10}{10}\,\frac{10}{10}$, teeth in use four or five; enamel rugous. *M. Americanus*, Molars $\frac{11}{11}\,\frac{11}{11}$. Teeth much smaller than in the preceding species; the number in action six. The crowns are higher, but the inner root as in M. nasutus is grooved on its internal surface.

II. *Palate.*—The median ridge is flattened on its summit and the palatine foramina are of variable sizes; the most ante-

rior is the largest and perforates the bone nearly vertically and with rounded edges. In the *M. latirostris* they are all more minute; in the *M. Senegalensis* and *M. Americanus*, the anterior are the largest, but perforate the bone obliquely and are protected for some distance after they assume the horizontal direction by a thin sharp edge or shelf of bone. The palatine foramina are subject to so great variety in most animals, that the characters just enumerated must be regarded as of doubtful value unless verified on a large number of crania.

III. *Malar bones.*—These are readily distinguished from the corresponding bones of all the other species in being very broad in their zygomatic portion, measuring nearly an inch in breadth at their free extremity. In *M. Senegalensis*, the zygomatic portion is slender, style-shaped, and terminated by a knob. This is also the case in *M. Americanus* and *latirostris*, except that in the last the part in question has no enlargement at its end, is a little broader than in the preceding, but forms a much closer union with the zygomatic portion of the temporal bone, approaching a suture of the kind called "harmonia."

IV. *Frontal region.*—In this as well as in *M. Americanus* the frontal region is quite narrow, but in the latter it is rounded, "bombée," while in the former it is depressed. The forehead of the *M. latirostris* and *Senegalensis* is proportionally much broader.

V. *Occipital foramen.*—In all the species this foramen is more or less triangular, the angles being rounded; but in *M. Americanus*, *Senegalensis*, and *latirostris* the apex is directed downwards, while in that from the Cavalla river it is directed upwards.

The number of known species of the genus Manatus now amounts to four, two from Africa, viz.: *M. Senegalensis and M. nasutus*, and two from the New World, viz.: *M. Americanus and M. latirostris.*

tum is the largest and perforates the bone nearly vertically and with rugged edges. In the M. americana they are all more minute; in the M. Senegalensis and M. americana, the anterior are the largest, but perforate the bone obliquely and are protracted for some distance after they assume the horizontal direction by a thin sharp edge or shelf of bone. The relative foramina are subject to so great variety in most animals, that the characters just enumerated must be regarded as of doubtful value unless verified on a large number of crania.

III. *Malar bone.*—These are readily distinguished from the corresponding bones of all the other species in being very broad in their zygomatic portion, measuring nearly as much in breadth at their free extremity. In M. americana, the zygomatic portion is slender, style shaped, and terminated by a knob. This is also the case in M. Senegalensis and M. [illegible], except that in the last the part in question has no enlargement of its end, is a little broader than in the preceding, and forms a much closer union with the zygomatic portion of the temporal bone, approaching a suture of the kind called "harmonia."

IV. *Frontal region.*—In this as well as in M. Americana the frontal region is quite narrow, but in the latter it is rounded, "bombé," while in the former it is depressed. The forehead of the M. [illegible] and Senegalensis is proportionally much broader.

V. *Occipital foramen.*—In all the species this foramen is more or less triangular, the angles being rounded; but in M. Americana, Senegalensis, and [illegible] the apex is directed downwards, while in that from the [illegible] river it is directed upwards.

The number of known species of the genus Manatus now amounts to four, two from Africa, viz.: M. Senegalensis and M. [illegible], and two from the New World, viz.: M. Americanus and M. [illegible].